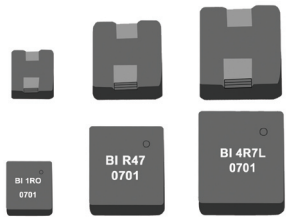
## Electrical / Environmental

# HM72A




NEW

RoHS Compliant

## High Power High Performance Molded Surface Mount Inductors

- Operating Temperature Range -40°C to +155°C
- Temperature Rise, Maximum 50°C

## Specifications @ 25°C

| Part Number | Inductance, Lo @ 100 kHz, 0Adc (µH) Min. | Typ. | Max. | Heating Current(1) (Adc) | $I_{sat}$ (2) (Adc) | DC Resistance (mΩ) Typ. | Max. | Height C (mm) | Figure |
|---|---|---|---|---|---|---|---|---|---|
| HM72A-06R20LF | 0.16 | 0.20 | 0.24 | 21.2 | 41 | 2.30 | 3.00 | 3.0 | 1 |
| HM72A-06R33LF | 0.26 | 0.33 | 0.40 | 18.0 | 30 | 3.20 | 3.90 | 3.0 | 1 |
| HM72A-06R47LF | 0.38 | 0.47 | 0.56 | 16.1 | 26 | 4.00 | 4.20 | 3.0 | 1 |
| HM72A-06R68LF | 0.54 | 0.68 | 0.82 | 14.4 | 25 | 5.00 | 5.50 | 3.0 | 1 |
| HM72A-06R82LF | 0.66 | 0.82 | 0.98 | 12.0 | 24 | 7.20 | 8.00 | 3.0 | 1 |
| HM72A-061R0LF | 0.80 | 1.00 | 1.20 | 10.3 | 22 | 9.00 | 10.00 | 3.0 | 1 |
| HM72A-061R5LF | 1.20 | 1.50 | 1.80 | 8.4 | 18 | 14.50 | 15.00 | 3.0 | 1 |
| HM72A-062R2LF | 1.76 | 2.20 | 2.64 | 8.3 | 14 | 15.00 | 20.00 | 3.0 | 1 |
| HM72A-063R3LF | 2.64 | 3.30 | 3.96 | 6.6 | 13.5 | 24.00 | 26.00 | 3.0 | 1 |
| HM72A-064R7LF | 3.76 | 4.70 | 5.64 | 5.4 | 10 | 35.00 | 40.00 | 3.0 | 1 |
| HM72A-066R8LF | 5.44 | 6.80 | 8.16 | 4.1 | 8 | 62.00 | 68.00 | 3.0 | 1 |
| HM72A-06100LF | 8.00 | 10.00 | 12.00 | 3.2 | 7 | 100.00 | 105.00 | 3.0 | 1 |
| HM72A-06220LF | 17.6 | 22.0 | 26.4 | 2.2 | 4.5 | 219.00 | 241.00 | 3.0 | 1 |
| HM72A-06330LF | 26.4 | 33.0 | 39.6 | 1.8 | 3.5 | 302.00 | 332.00 | 3.0 | 1 |
| HM72A-10R15LF | 0.12 | 0.15 | 0.18 | 33.0 | 44 | 0.75 | 0.82 | 4.0 | 2 |
| HM72A-10R24LF | 0.19 | 0.24 | 0.29 | 35.0 | 38 | 0.65 | 0.72 | 4.0 | 2 |
| HM72A-10R36LF | 0.288 | 0.360 | 0.432 | 32.0 | 35 | 0.85 | 0.95 | 4.0 | 2 |
| HM72A-10R47LF | 0.38 | 0.47 | 0.56 | 27.0 | 32 | 1.10 | 1.20 | 4.0 | 2 |
| HM72A-10R56LF | 0.448 | 0.560 | 0.672 | 23.0 | 30 | 1.55 | 1.70 | 4.0 | 2 |
| HM72A-101R0LF | 0.80 | 1.00 | 1.20 | 18.0 | 21 | 2.56 | 2.75 | 4.0 | 2 |
| HM72A-101R5LF | 1.20 | 1.50 | 1.80 | 13.0 | 18 | 4.50 | 5.00 | 4.0 | 2 |
| HM72A-101R8LF | 1.44 | 1.80 | 2.16 | 13.0 | 15 | 4.50 | 5.00 | 4.0 | 2 |
| HM72A-103R3LF | 2.64 | 3.30 | 3.96 | 8.0 | 12 | 12.50 | 13.75 | 4.0 | 2 |
| HM72A-104R7LF | 3.76 | 4.70 | 5.64 | 7.6 | 10 | 13.80 | 15.20 | 4.0 | 2 |
| HM72A-12R47LLF | 0.38 | 0.47 | 0.56 | 31.0 | 55 | 1.30 | 1.43 | 3.5 | 2 |
| HM72A-12R68LLF | 0.54 | 0.68 | 0.82 | 27.0 | 49 | 1.80 | 2.00 | 3.5 | 2 |
| HM72A-12R82LLF | 0.66 | 0.82 | 0.98 | 22.0 | 44 | 2.40 | 3.00 | 3.5 | 2 |
| HM72A-121R0LLF | 0.80 | 1.00 | 1.20 | 19.0 | 42 | 3.40 | 3.60 | 3.5 | 2 |
| HM72A-124R7LLF | 3.76 | 4.70 | 5.64 | 10.0 | 24 | 14.00 | 15.00 | 3.5 | 2 |
| HM72A-125R6LLF | 4.48 | 5.60 | 6.72 | 8.0 | 19 | 22.50 | 24.75 | 3.5 | 2 |
| HMA72-12R50LF | 0.40 | 0.50 | 0.60 | 39.0 | 65 | 1.30 | 1.50 | 5.0 | 2 |
| HMA72-12R56LF | 0.45 | 0.56 | 0.67 | 34.0 | 55 | 1.30 | 1.50 | 5.0 | 2 |
| HM72A-121R0LF | 0.80 | 1.00 | 1.20 | 26.0 | 50 | 2.20 | 2.50 | 5.0 | 2 |
| HM72A-121R5LF | 1.20 | 1.50 | 1.80 | 20.0 | 48 | 3.60 | 4.10 | 5.0 | 2 |
| HM72A-122R2LF | 1.76 | 2.20 | 2.64 | 17.0 | 32 | 5.00 | 5.50 | 5.0 | 2 |
| HM72A-121R0HLF | 0.80 | 1.00 | 1.20 | 31.0 | 49 | 1.70 | 2.00 | 6.5 | 2 |
| HM72A-122R2HLF | 1.76 | 2.20 | 2.64 | 22.0 | 40 | 3.50 | 3.85 | 6.5 | 2 |
| HM72A-123R3HLF | 2.64 | 3.30 | 3.96 | 19.0 | 35 | 5.50 | 6.80 | 6.5 | 2 |
| HM72A-124R7HLF | 3.76 | 4.70 | 5.64 | 15.0 | 30 | 7.20 | 7.92 | 6.5 | 2 |

Notes : (1) The heating current is the DC current which causes the component temperature to increase by approximately 50°C. This current is determined by soldering the component on a typical application PCB, and then apply the current to the device for 30 minutes.

(2) The saturation current ($I_{sat}$) is the approximate current at which the inductance will be decreased by 20% typical from its initial (zero DC) value.

## Outline Dimensions (mm)

**Figure 1**

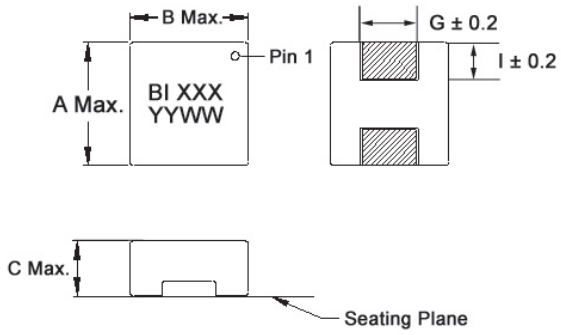
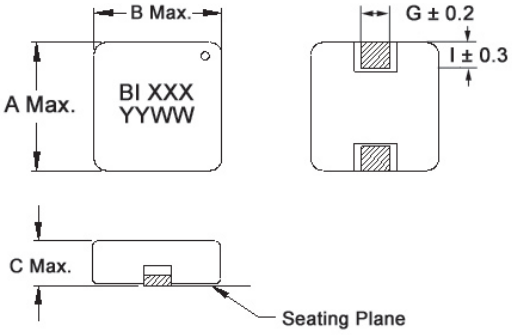
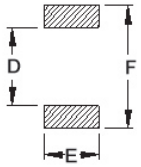



**Figure 2**




### Recommended Land Pattern

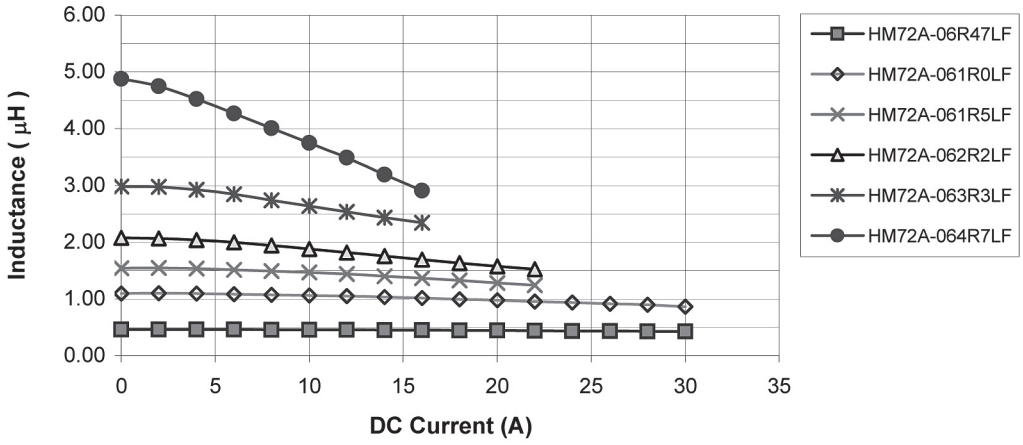



| Case Size | Fig. | A | B | D | E | F | G* | I |
|---|---|---|---|---|---|---|---|---|
| 06 | 1 | 7.23 | 6.8 | 2.0 | 3.3 | 7.4 | 3.0 | 2.0 |
| 10 | 2 | 11.5 | 10.5 | 4.9 | 3.3 | 11.5 | 3.0 | 2.5 |
| 12* | 2 | 13.5 | 13.0 | 6.9 | 3.3 | 13.5 | 3.0 | 2.5 |

**Note: Refer to Specifications table for 'C' dimension of each model.**
*** The 'G' dimension of HM72-123R3HLF & HM72A-124R7HLF is 2.3mm.**

## Electrical Characteristics @ 25°C

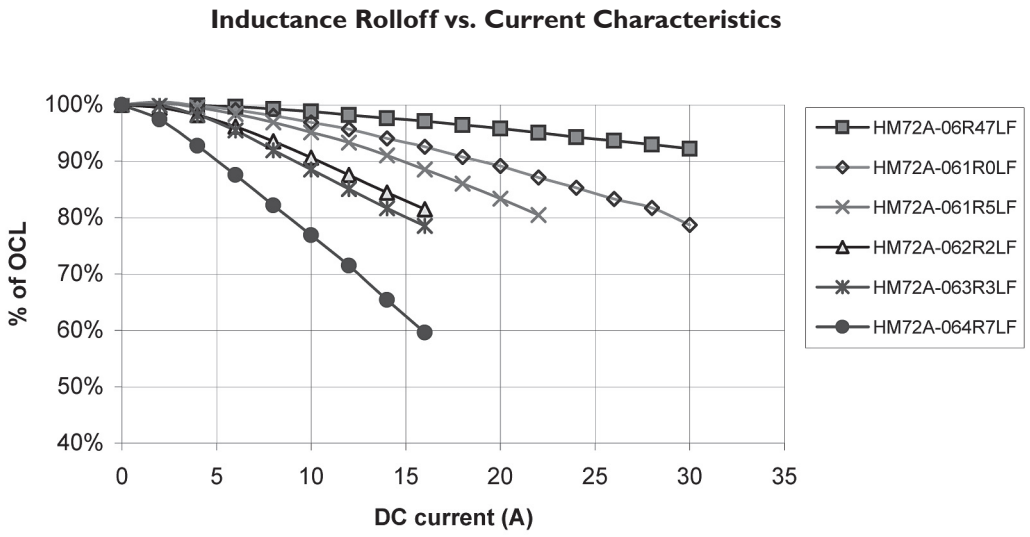
### Inductance vs. Current Characteristics





We reserve the right to change specifications without prior notice.

## Electrical Characteristics @ 25°C (Cont'd)




## Packaging

**Standard**: Embossed Tape and Reel

| | | | | |
|---|---|---|---|---|
| Reel: | Diameter: | | = | 13" (330.2mm) |
| | Capacity: | 06XXX | = | 1,000 Units |
| | | 10XXX | = | 500 Units |
| | | 12XXXL | = | 500 Units |
| | | 12XXX/ 12XXXH | = | 400 Units |

## Ordering Information

**HM72A 06 1R0 LF TR13**

- HM72A — Model Series
- 06 — Case Size: 06, 10, 12
- 1R0 — Inductance Code: First 2 digits are significant. Last digit denotes the number of trailing zeros. For values below 10µH, "R" denotes the decimal point.
- LF — Lead Free
- TR13 — TR - Tape & Reel Packing 13" - 13" Reel